DISARMAMENT

Facts 72

The Role of the United Nations
in the Field of Verification
Summary of a United Nations Study

United Nations

Preface

The cover reproduces the emblem of the United Nations and the emblem of the World Disarmament Campaign, a global information programme on disarmament and international security launched by the General Assembly in 1982 at its second special session devoted to disarmament. The programme has three primary purposes: to inform, to educate and to generate public understanding of and support for the objectives of the United Nations in the field of arms limitation and disarmament. In order to achieve those goals, the programme is carried out in all regions of the world in a balanced, factual and objective manner.

As part of the programme's activities, the Department for Disarmament Affairs provides information materials on arms limitation and disarmament issues to the non-specialized reader. Such materials cover, in an easily accessible style, issues which may be of particular interest to a broad public. This is one such publication. It is published in the official languages of the United Nations and intended for world-wide dissemination free of charge.

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The Role of the United Nations in the Field of Verification

Summary of a United Nations Study

Background

By resolution 43/81 B of 7 December 1988, the General Assembly requested the Secretary-General to undertake, with the assistance of a group of qualified governmental experts, an in-depth study of the role of the United Nations in the field of verification and to submit a comprehensive report on the subject to the General Assembly at its forty-fifth session. In accordance with the resolution the study should: (a) identify and review existing activities of the United Nations in the field of verification of arms limitation and disarmament; (b) assess the need for improvements in existing activities as well as explore and identify possible additional activities, taking into account organizational, technical, operational, legal and financial aspects; and (c) provide specific recommendations for future action by the United Nations in this context.

Twenty governmental experts were appointed by the Secretary-General to assist him in carrying out the study. They were from the following States: Argentina, Brazil, Canada, China, Czechoslovakia, France, the German Democratic Republic, Hungary, India, Japan, Kenya, Mexico, the Netherlands, Nigeria, the Soviet Union, Sweden, the United Kingdom, the United States, Yugoslavia and Zaire. The Group held

four sessions from February 1989 to July 1990, during the course of which it prepared the study report under the chairmanship of the Canadian participant, the Assistant Deputy Minister for Political and International Security Affairs, Mr. Fred Bild.

In August 1990, the Secretary-General transmitted to the General Assembly the unanimously approved report of the experts. In his foreword to the report, the Secretary-General notes that "there can be no doubt that for participating States in a multilateral arms limitation and disarmament agreement, multilateral verification arrangements will be essential to create and develop mutual confidence in compliance". The Secretary-General adds that "as an organization with global membership and a recognized responsibility for the maintenance of international peace and security, it is entirely appropriate that the United Nations should be at the forefront of international efforts regarding such arrangements".

Highlights of the report

The report is structured in six chapters and contains a bibliographical appendix on technical aspects of verification. The Introduction provides a brief historical background on the development of the question of verification in the United Nations context, culminating with the adoption by the General Assembly of resolution 43/81 B, which requested the study.

Chapters II and III address the definition and functions of verification and the various approaches, methods, procedures and techniques used in the process of

verification. Chapters IV and V examine the existing activities of the United Nations in the field of verification, possibilities for improvements in those activities as well as possible additional activities, while addressing the organizational, technical, legal, operational and financial implications of each of the possibilities discussed. Chapter VI presents the conclusions and recommendations of the Group.

The following is a summary of the various issues discussed in the report.

Verification: definition and functions

The report describes verification as a process which establishes whether States parties are complying with their obligations under an agreement. It takes place in the context of the sovereign right of States to conclude arms limitation and disarmament agreements and their obligation to implement those agreements.

The process of verification consists of multiple steps which include monitoring/collection of information relevant to obligations under arms limitation and disarmament agreements; analysis of the information; and reaching a judgement as to whether the specific terms of an agreement are being met. These various phases of the verification process are often interactive and it is not always possible to distinguish clearly between them.

Monitoring/data collection is defined as the process of watching, observing or checking objects, activities or events for a specific purpose. Monitoring/data collection

and analysis can be undertaken for a wider range of purposes than verification, including, for instance, crisis prevention, peace-keeping and general intelligence gathering. According to the report, verification procedures must be carefully designed to prevent, as far as possible, collection of data unrelated to the purpose of verifying the treaty concerned.

The initial steps in the process of verification are dominated by technical and operational considerations. Technical experts involved in this stage of the process as a rule are not asked and do not seek to make judgements of compliance or non-compliance on the basis of the data they are collecting and analysing. Such judgements are normally within the province of political officials and are rendered only in the final stages of the verification process. Once a determination is made that a violation has been committed, deciding what to do about it (i.e., "enforcement") is not part of the verification process.

"Adequate", "effective" or "appropriate" are the words which, according to the report, are often used to describe the standard of verification considered necessary by States in the context of a given agreement, as there is widespread recognition that no verification régime can uncover every conceivable problem. Therefore, it is essential that verification provisions and monitoring capabilities are designed not only to allow for the detection of violations in time for States parties to take appropriate action, but also to help to prevent cheating from taking place.

Discussing the general framework in which verification provisions could be agreed upon and implemented, the Group of Experts draws attention to the 16 principles of verification developed by the United Nations Disarmament Commission and endorsed by the General Assembly in 1988 as useful guidelines in the negotiation of arms limitation and disarmament agreements.

The study also discusses five specific functions fulfilled by verification which serve to create the necessary confidence for a successful and sustainable process of arms limitation and disarmament. A primary function of verification is *assessing the day-to-day pattern of implementation* of an agreement's provisions. Monitoring capabilities must be sufficiently adequate and effective to provide assurance that nations are faithfully and fully carrying out their obligations. Another function of verification is to *generate confidence*, rather than distrust, within participating States that others are fulfilling their obligations under an agreement. An important element for building confidence is the ability of States parties to collect information relating to an agreement sufficient to assess compliance practices of other States. Ascertaining that verification provisions are not abused or misused for collecting information that has no direct bearing on obligations undertaken by participating States is another important element in building confidence through the process of verification.

Yet another function of verification is to provide procedures for *dealing with uncertainties* and false alarms associated with implementation and compliance since no agreement, regardless of the specificity and intrusiveness of its terms, can anticipate

every conceivable eventuality. Agreed verification provisions can also *discourage non-compliance* by raising the financial, opportunity and political costs of non-compliant behaviour. This latter function of verification is very much related to that of providing *timely warning* of potential compliance problems. For instance, intrusive verification measures such as timely access to sensitive military installations can make surreptitious non-compliance more difficult, expensive, time-consuming, or obvious.

Several other relevant aspects of the process of verification are discussed in the study – its bilateral/multilateral dimensions, the legal aspects involved in the process and the question of the treaty-specific nature of verification.

In the view of the experts, adequate and effective verification measures are no less important for multilateral agreements than for bilateral accords. While verification provisions will necessarily be keyed to the specific requirements of an agreement, the growing similarity of verification techniques for multilateral and bilateral agreements could help both kinds of negotiations in the future.

In some respects, verification arrangements at the multilateral level can be even more critical, the report notes, as new complexities can be added in the negotiation of new accords and verification provisions may have to address a broad range of different conditions. Monitoring arrangements of multilateral accords must also effectively bridge the diverse verification capabilities of individual States parties. At the same time, multilateral verification arrangements may offer organizational economies and efficiencies as the number of parties to an agreement grows.

Regardless of the type of accord or arrangements which are agreed upon by States parties, the exercise of verification must nevertheless be based on the principles of international law. A fundamental principle is that of respect by each sovereign State for the territorial integrity and political independence of other States. At the same time, when States fulfil constitutional processes to become parties to arms limitation and disarmament agreements, under international law they are obligated to take measures necessary for the proper implementation of provisions negotiated and agreed in good faith.

Verification of arms limitation and disarmament is also agreement-specific, that is, verification procedures and techniques are somewhat different from one agreement to the next, depending on the specific objects and purposes of each accord and the number of parties involved. Furthermore, verification is the responsibility of States parties to such agreements, unless they explicitly consent to the involvement of other States or organizations in the verification process.

Verification approaches, methods, procedures and techniques

In the study, verification approaches are divided into two main categories – national technical means (NTM) and co-operative measures.

NTM are devices under the control of a State party that can be used for monitoring at a distance compliance with arms limitation and disarmament agreements; thus NTM do not disrupt activities within the State being monitored nor do they require

a physical presence within that State. NTM include observation satellites, aircraft-based systems, such as radars and cameras, as well as sea- and ground-based systems. Many States possess another kind of NTM: seismic stations that could be used to provide data concerning underground explosions.

Co-operative measures, on the other hand, could include, but are not limited to, designing weapons systems and their deployment modes in ways that simplify verification; permitting aircraft overflights to observe military-related installations and activities; pre-notifying certain weapons tests to allow other States to monitor them more effectively; conducting joint verification experiments to assist monitoring efforts; arranging for foreign representatives to observe or inspect, with an appropriate degree of intrusiveness and timeliness, installations or activities; and non-interference with NTM. In addition, the provision and exchange of data can be an extremely important co-operative measure: it can build confidence and increase transparency.

Continuity and adaptability are essential components of successful verification approaches and methods, notes the report. First, no single verification tool is likely to be sufficient for any accord; adequate and effective verification arrangements will require the synergistic and overlapping application of numerous approaches and devices. For example, questions arising from information gathered by satellites can be addressed by on-site inspections. Secondly, the same device can perform more than one monitoring task and it can be utilized for new tasks that are assigned. That is the case, for instance, with optical imaging satellites which can be utilized for many different arms

limitation and disarmament agreements as well as for efforts to defuse crises.

The study notes that, as monitoring tools, observation satellites, though they have their limitations, provide broad coverage over areas of concern and provide analysts with an important means of detecting, over time, changes on the ground that may be of military significance. Satellite coverage has been particularly useful for monitoring large objects, such as naval combatants, bombers, and most types of strategic weapons launchers as well as military installations. The smaller and more mobile the object, the harder it is to observe from space and the more other methods of coverage become necessary.

The report further notes that disparities in observation capabilities have been a cause of concern for some, especially in the context of multilateral negotiations. This concern, as well as a broader interest in providing the international community with information relating to issues of common security, has led some States to advocate the use of observation satellites as a central component for an international verification mechanism.

Even though NTM have become increasingly sophisticated, the experts point out that co-operative measures have grown in importance for both multilateral and bilateral accords. The complexity of current and prospective negotiations, together with the small size, mobility or dual purpose nature of many of the weapons systems and military capabilities negotiators seek to prohibit, limit or reduce, have progressively demanded co-operative measures.

National systems of accounting for and control of specific materials, such as nuclear, are a special kind of national, co-operative measure in the field of verification. One such example is the national control authorities which co-operate with the International Atomic Energy Agency (IAEA) in the implementation of its safeguards system. Under a future convention on chemical weapons, States parties may be required to designate or establish national authorities to implement treaty obligations.

An example of an intrusive co-operative measure is on-site inspections (OSI). In order to work properly, OSI require close co-operation between the host country and the inspectors. Detailed procedures should be worked out in advance to clarify the rights and obligations of the inspectors as well as of their hosts.

OSI can take many different forms. They can be systematic or *ad hoc*. For example, in the INF Treaty (the Soviet-United States Treaty on the elimination of their intermediate- and shorter-range missiles), five different types of inspections were agreed upon: "baseline inspections" to help verify the initial exchange of data; "close-out inspections" to confirm that treaty-prohibited activities have ceased; "elimination inspections" to observe the destruction of treaty-limited items; "short-notice inspections" without right of refusal at agreed facilities; and "continuous portal monitoring" at selected production facilities. Routine inspections of industrial enterprises are being elaborated in the negotiations taking place regarding a chemical weapons convention.

Existing activities of the United Nations in verification

After recalling the various proposals relating to a United Nations role in verification which were submitted by Member States to the first (1978) and second (1982) special sessions of the General Assembly devoted to disarmament and other disarmament forums, the study focuses on the four proposals which were presented at the third special session devoted to disarmament, held in 1988. The proposals were submitted, respectively, by the countries represented in the Six-Nation Initiative – Argentina, Greece, India, Mexico, Sweden and the United Republic of Tanzania – and by Canada and the Netherlands, by France, and by Bulgaria, Czechoslovakia and the Soviet Union.

The proposal of the Six-Nation Initiative was a follow-up to an earlier initiative introduced by the six countries in the Stockholm Declaration of January 1988. In a joint working paper, the sponsors called for the special session to endorse the principle of an integrated multilateral verification system within the United Nations and to request the Secretary-General to prepare, with the help of qualified experts, an outline of such a system.

The proposal by Canada and the Netherlands focused on the constructive role which the United Nations could play in multilateral verification by functioning as an information clearing-house and providing assistance and expertise in the area of verification. In that connection, an in-depth United Nations study was proposed to help the development of an appropriate role for the Organization in verification.

France's paper proposed, among other things, the establishment of a group of experts to study the relationship between verification and security, prepare an inventory of verification methods, techniques and procedures and reflect on the future role of the United Nations in the field of verification. At the time, France indicated its readiness to combine this proposal with that made by Canada and the Netherlands. The establishment, within the United Nations, of an agency for the processing and interpretation of space images was also proposed in the French paper.

Bulgaria, Czechoslovakia and the Soviet Union called for the consideration of the establishment, under the auspices of the United Nations, of a mechanism for wide-ranging international verification of compliance with agreements aimed at reducing international tension and limiting armaments, and for monitoring the military situation in regions of conflict.

A decision by the General Assembly on the subject of verification and the United Nations was taken only later that year, during the forty-third regular session of the Assembly, when resolution 43/81 B was adopted. The resolution was in reality a composite text, the result of delicate and extensive negotiations between the countries represented in the Six-Nation Initiative, on the one hand, and Canada, France and the Netherlands, on the other, following the respective submissions by the two groups of States of separate draft resolutions on verification at the multilateral level.

As regards verification provisions which involve the United Nations under existing agreements, the Group observes that there is a number of arms limitation and disarmament agreements, as well as some disarmament-related agreements, which include provisions referring to the United Nations or the Secretary-General, to specialized agencies, or to the International Court of Justice. In most cases, those provisions relate to a monitoring or co-operative role, as through certain types of exchange of information, and to the settlement of disputes regarding the interpretation or application of a given treaty. These provisions do not involve, however, the actual rendering of compliance judgements and have for the most part not been activated. A table outlining the respective multilateral agreements and their provisions is contained in pages 46-48 of the report for detailed reference.

In the subsequent paragraphs of the report, the experts discuss the exchange of information which has been carried out by States parties to the biological weapons Convention since 1987 through the Secretary-General. Under the exchange, which was called for at the Second Review Conference of the Convention, States parties provide data on research centres and laboratories involved in permitted biological activities directly related to the Convention and on all outbreaks of infectious diseases and similar occurrences to the Secretary-General. In turn, he circulates the information among the parties to the Convention.

The study also describes the safeguards system of the International Atomic Energy Agency, which is authorized under its Statute "to establish and administer

safeguards designed to ensure that special fissionable and other materials, services, equipment, facilities and information made available ... are not used in such a way as to further any military purpose".

The Secretary-General's investigative role in connection with the alleged use of chemical weapons is also broadly discussed. As pointed out in the report, the 1925 Geneva Protocol contains no specific provisions regarding verification arrangements. Nevertheless, allegations of use of chemical warfare, from time to time, led the General Assembly to adopt, for the first time in 1980, a resolution calling upon the Secretary-General to carry out an investigation of such allegations with the assistance of qualified medical and technical experts. Further requests were made to the Secretary-General, both by the General Assembly and the Security Council, for additional fact-finding missions as well as for criteria and procedures to facilitate his role.

Other activities are described which, though not considered verification tools for arms limitation and disarmament agreements in and of themselves, are nevertheless regarded as relevant to the process as a whole. One such activity is the standardized instrument for international reporting of military expenditures. The instrument has been developed by the United Nations as part of a broad effort to develop a set of specific measures that would facilitate the reduction of military expenditures while contributing, at the same time, to openness of information and confidence. Since 1981, an increasing

number of Member States have provided the Secretary-General with information on their military expenditures by using the standardized reporting instrument.

Another activity discussed in the report in this context is the work of the *Ad Hoc* Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events. Established in 1976 by the Conference of the Committee on Disarmament (CCD), the *Ad Hoc* Group has been working on the development of a global seismic data exchange system aimed at expeditiously providing comprehensive information on seismic events, collected on a global basis and processed according to agreed procedures. In this connection, the report adds that, although some States have a different position on a comprehensive nuclear- test ban, it is widely considered that a modern international seismic data exchange system could contribute to verification of compliance with a possible future nuclear-test-ban treaty by its States parties.

The study report further cites the peace-keeping operations of the United Nations which, as monitoring tools, are in a very real sense multilateral co-operative measures – they require the co-operation of the parties concerned and the continuing support of the States contributing troops and the Security Council.

Activities of the Department for Disarmament Affairs and the United Nations Institute for Disarmament Research (UNIDIR) relevant to verification are also reviewed.

Improvements in existing activities and possible additional activities

According to the study, a point of departure for assessing the need for United Nations involvement in the verification of arms limitation and disarmament agreements should be the fact that it is universally recognized that such agreements should be adequately and effectively verified and that all States have equal rights to participate in the process of international verification of agreements to which they are parties. In addition, as no other international organization with comparable status and universal coverage exists in this field, it is appropriate, says the Group, to explore possible contributions that the United Nations might make to the universal and non-discriminatory application of available means of verification.

Noting that the list of possibilities examined is not exhaustive, the report provides a descriptive survey of proposals where, according to the experts, the organizational, technical, operational, legal and financial aspects can be readily assessed, and where short-, medium-, and long-term implications can be considered carefully. The proposals discussed by the experts cover six areas: (1) United Nations capability for data collection; (2) promotion of exchanges between experts and diplomats; (3) possible expansion of the Secretary-General's fact-finding activities; (4) possible uses of aircraft for verification purposes; (5) possible uses of satellites; and (6) possible creation of an international verification system. The study further notes that cost estimates for these proposals will vary as they depend on the tasks at hand, the specific configuration of the

equipment employed and the manner of its use. Thus, the estimates presented in the study are only illustrative of the magnitudes of the sums involved.

Conclusions and recommendations

After a brief summary of the findings, the study presents conclusions and recommendations in connection with the six areas of activities discussed in chapter V of the report, as follows:

A. Data collection capability

The study suggests that, in the short term, in anticipating further advances in the field of treaty-specific verification, the United Nations can play a useful role in making research and data relating to co-operative arrangements and verification available to wider audiences. A United Nations data collection capability could assist governmental experts and negotiators on verification provisions and confidence- and security-building measures. This impartial and non-discriminatory capability would facilitate their work and help to lay the foundation for their eventual involvement in future negotiations or existing multilateral agreements. Such United Nations services should not entail significant new expenditures or the creation of new bodies. Voluntary contributions, on an objective and non-discriminatory basis, can be made by Member States; these could include bibliographies and existing published materials by Member States, including the provision of rosters of experts and organizations to whom questions could be addressed and with whom verification research projects could be discussed.

The study recommends that the United Nations, through the Department for Disarmament Affairs, develop a consolidated data bank of published materials and data provided on a voluntary basis by Member States on all aspects of verification and compliance. The data bank might include, *inter alia*: the history of negotiations and treaty compliance; procedures for verification and monitoring; information on techniques and instrumentation for verification and monitoring; lists of contacts and experts on verification and addresses of institutions, organizations, companies and individuals which can provide expertise, technologies, advice on aspects of verification, bibliographic information and data – including data connected with the biological weapons Convention and the future chemical weapons convention.

The study also recommends that the United Nations should make the data easily accessible to all Member States by regularly publishing the lists and additions in the data bank. For instance, *The United Nations Disarmament Yearbook* could cover, by way of dedicated chapters, the range of data, in particular new developments, held in the data bank. Special reports, with a wide circulation, could be prepared as a result of data collected by the United Nations. Particular emphasis might be given to the use of computers for data storage and retrieval, on-line data access, devices for mass data storage and interfacing with relevant data bases to which Member States provide access.

The study further recommends that the United Nations should take an active part in facilitating the operational international exchange of data contributing to treaty verification upon request of States parties and to confidence-building.

In this context, the study discusses whether such an exchange could include the collection, compilation and distribution of data obtained by a variety of means such as may be appropriate to the requirements of a future treaty or treaties. Included among the issues discussed were seismological and radiological measurements, overhead imagery obtained from satellites and aircraft, and the proposed agency for the processing of satellite images (APSI). The Group of Experts did not pass definitive judgement on these issues, as it felt that decisions on them should be left to the appropriate multilateral forums.

B. Exchanges between experts and diplomats

The study further suggests that, in the short term, in anticipation of further advances in the field of treaty-specific verification and new agreements increasing confidence and transparency between States, the United Nations can play a constructive role in promoting exchanges between experts and diplomats to help the latter to address negotiating problems, and to help experts focus on needed solutions. Such exchanges can contribute to the creation of general overall awareness of verification issues, enabling States to have a fuller appreciation of the role of verification in alleviating their security concerns. The States may thus also reach a better appreciation of difficult verification problems and of the appropriate monitoring methods for their solution. The exchanges could also promote international co-operation in the development of verification procedures and technology. Responsibility for carrying out a wider exchange programme could be assumed by the Department for Disarmament Affairs. In this regard the

Department could seek co-operation with national institutions as well as international non-governmental organizations and scientific research institutes such as the Pugwash Conferences on Science and World Affairs and the Stockholm International Peace Research Institute (SIPRI).

The study recommends that the United Nations, through the Department for Disarmament Affairs and, when appropriate, in co-operation with UNIDIR, promote workshops, seminars and training programmes on verification and compliance. In addition, it would be useful for the United Nations Disarmament Fellowship, Training and Advisory Services Programme to give increased attention to the subject of verification and compliance.

The study further recommends that the United Nations explore ways to provide expert advice to States, at their request, to establish and implement verification structures, thereby increasing their effective participation in agreements.

The study proposes further that the United Nations, through UNIDIR, increase its support to ongoing multilateral negotiations by undertaking specific research on verification topics, responsive to the needs of those negotiations. UNIDIR could, for example, undertake research tasks that address specified problems encountered during the negotiations. UNIDIR could also continue to commission research into new verification technologies, methods and procedures as well as legal aspects of verification and compliance.

C. The role of the Secretary-General in fact-finding and other activities

The study suggests that the experience gained from the Secretary-General's fact-finding activities could be helpful in connection with certain arms limitation and disarmament agreements that lack explicit verification provisions. The study reflects the view that, in the short term, the Secretary-General's capabilities may be further strengthened and broadened, provided he is granted a mandate to do so. Such enhancement could be achieved either by broadening the scope of the Secretary-General's capabilities or by expanding the means through which the existing mandate is carried out. For example, the Secretary-General's fact-finding mandate could be extended to cover the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects. Proper care must be taken to ensure that whatever organizational arrangements are agreed upon, they should not hinder the Secretary-General's flexibility to conduct fact-finding missions in a manner most appropriate to the circumstances at hand. The determination of what actions the Secretary-General may undertake to strengthen his fact-finding capabilities will be dependent upon the mandate he is given and must be made on a case-by-case basis.

In addition, the complementary role played by bilateral and multilateral arms limitation and disarmament efforts can be further strengthened through the United Nations. To this end, the study recommends that States parties to future multilateral arms limitation and disarmament agreements should consider depositing those

instruments with the Secretary-General of the United Nations, as is the case, for instance, of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies. In this connection, States parties should also consider providing to the Secretary-General and the General Assembly periodic reports regarding the implementation of those agreements for subsequent dissemination to all Member States. As has been the case in several multilateral agreements, review conferences could also be organized with the assistance of the United Nations.

D. Use of aircraft for verification purposes

The possible use of aircraft by the United Nations as a verification tool is also discussed. Such United Nations use of aircraft would of course require the consent and support of States parties to the agreements concerned. Where existing agreements lack thorough verification procedures, aircraft could be used in conjunction with fact-finding missions on the ground. Where established verification procedures already exist, the use of aircraft by the United Nations would require careful co-ordination. The use of aircraft for verification purposes by the United Nations would have significant organizational and financial implications which would require appropriate governmental approval and support. The question of processing the data acquired through the use of aircraft must also be properly addressed. Costs might be reduced if Member States were prepared to donate the use of specialized aircraft for verification purposes on a temporary basis as

required. The Group did not pass definitive judgement on this issue.

E. Use of satellites

Noting that the use of satellites has played a key role in verifying arms limitation and disarmament agreements and is likely to have continued relevance for the future, the study further discusses the development and launching of a United Nations satellite network for arms limitation and disarmament verification. Such a network would involve not merely providing the necessary satellite hardware but also major investments in acquiring relevant expertise and an image analysis capability. These undertakings would have very great organizational and financial implications. Because of the lead-time required to design, develop and build such a network, the use of its own satellites by the United Nations for arms limitation and disarmament verification appears unlikely, at least in the short term, unless donations in kind are made by Member States. However, a first step in that direction could be the decision to organize, within the existing architecture, a "clearing house" for data gathered from existing satellites, where training would also be offered in the field of basic photo-interpretation. The Group of Experts did not pass definitive judgement on this issue.

F. Towards an international verification system

The study further addresses the issue of an international verification system. The same basic reasons which have led to a multilateral approach to certain arms limitation and disarmament questions also raise the issue of a multilateral framework to ensure the

verification of resulting disarmament agreements. Many nations do not have the means to perform the full range of tasks nor do they have access to the necessary expertise.

It is suggested in the study that the development of a United Nations verification system will depend in large measure on further changes in the political environment and on the verification requirements emerging from continued advances in arms limitation and disarmament agreements. Moreover, the development of appropriate multi-purpose verification techniques would greatly facilitate this process. The development of a United Nations verification organization must be seen as an evolutionary process. There are several possible ways in which an international verification system could come into existence, one of which might be as an "umbrella" verification organization resulting from the co-ordination or merging of two or more future verification systems. The Group of Experts did not pass definitive judgement on this issue; however, it recognizes that the subject will continue to be considered in the light of future developments.

The report concludes by stating that the present international situation provides the right environment to engender a dynamic multilateralism. Indeed, the present situation and the complexity of the problems faced by the international community suggest the need to develop a system which can cope with the problems of security and disarmament in a multilateral framework. The United Nations is unique in its global scope, its membership and its Charter. The role played by the United Nations in the recent past in addressing crisis situations is a sign that it is likely to be called upon

in the coming years to deal with a number of such situations. With the prospect of greater attention being given to achieving multilateral agreements on arms limitation and disarmament, an enhanced United Nations capability to assist in verification, with the consent of all States parties to such agreements, could be a significant contribution to international security and co-operation.

Decision of the General Assembly, 1990

On 4 December 1990, the General Assembly adopted without a vote resolution 45/65. Among the provisions of the resolution, the General Assembly recognized that the United Nations, in accordance with its role and responsibilities established under the Charter, can make a significant contribution in the field of verification, in particular of multilateral agreements; affirmed its support for the 16 principles of verification drawn up by the Disarmament Commission; and noted that recent developments in international relations have underscored the importance of effective verification of existing and future arms limitation and disarmament agreements. The General Assembly also welcomed the report and requested the Secretary-General to give it the widest possible circulation and to take appropriate action within available resources on the recommendations of the Group. Furthermore, the Assembly encouraged Member States to give active consideration to the recommendations contained in the concluding chapter and to assist the Secretary-General in their implementation where appropriate.

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Facts

72